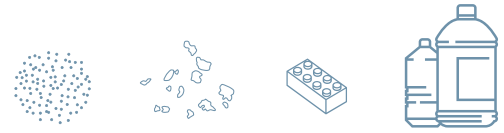
# Not all Plastics are Equal

While plastic is a blanket term commonly used, the composition of the various plastics is as diverse as their areas of application.

The word synthetic refers to a material that has been artificially made. Unfortunately, the most common forms of synthetics are produced from non-renewable crude oil. When organic molecules called monomers are joined together to form longer chains, we call these polymers. There are not only artificially manufactured polymers, but also natural ones. A well-known natural example is the polymer cellulose, which is the main component of plant cell walls.

Plastic can be generally divided into the four following categories based on size:



**Microplastic** 0.05 – 0.5 cm | **Mesoplastic** 0.5 – 5 cm | **Macroplastic** 5 – 50 cm | **Megaplastic** > 50 cm

Out of these categories above, microplastic plays the most significant role in cosmetics, where a distinction is made between **primary** and **secondary** microplastic:

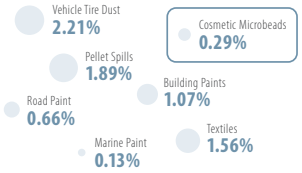
## Micro Pollutants

### Microplastic

ECHA working definition: **Any polymer**, or polymer-containing, **solid or semisolid** particle having a size of **5mm or less** in at least one external dimension.

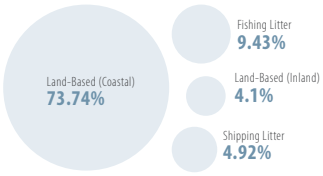
#### Primary microplastic

(950'000 Tons per Year)




#### Secondary microplastic

(11'250'000 Tons per Year)




Smaller plastic particles produced by erosion of bigger plastic particles (tides, sun, wind)

Types of microplastics found in the ocean

### Liquid, water soluble plastic

Not included in ECHA working definition.

Not biodegradable
Are of growing concern

**Primary microplastic** is produced already in the form of microplastic (e.g. fibres in the textile industry or microbeads in exfoliating products)

**Secondary microplastic** arises from the degradation of macroplastic (e.g. packaging) into ever-smaller pieces. This can be due to the influence of weathering, rock impact, saltwater, or sunlight.

The primary microplastics used in cosmetic products are washed with our wastewater into the natural water bodies and, ultimately, into the ocean. 3.7% of the primary microplastic pollution in our oceans comes from cosmetic products[1].

Do you, too, want to produce plastic-free, sustainable cosmetics? Are you looking for alternatives to synthetic scrub particles, or do you want to replace liquid plastics in your cosmetic products?

[1] Quelle: https://www.eunomia.co.uk/reports-tools/plastics-in-the-marine-environment/

We would be happy to present our «Disconnect from Plastics» concept and show you the formulations of the future.

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